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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,499	08/25/2003	Giana M. Phelan	86327RLO	2373

7590 06/28/2005

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EXAMINER

COLON, GERMAN

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/647,499	<b>Applicant(s)</b> PHELAN ET AL.	
	<b>Examiner</b> German Colón	<b>Art Unit</b> 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/25/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Wittman et al. (US 2004/0036856).

Regarding claim 1, Wittman discloses a method of making an OLED that corrects potential defect(s) identified in one processing station by adjusting a subsequent processing, comprising:

processing an OLED substrate by adding at least one organic layer and measuring in-situ one or more parameters associated with such organic layer to produce a signal representative of potential defect(s) in a produced OLED device (see paragraph [0010], lines 4 to paragraph [0011], line 6); and

adjusting in a subsequent processing in response to the signal to change the formation of a subsequent organic layer added to the OLED to compensate for the potential defect(s) (see paragraphs [0023], [0024] and [0026]).

Regarding claims 3 and 4, Wittman discloses (a) using spectroscopic ellipsometry to determine the thickness of the organic layer and (b) adjusting the thickness of the subsequent

organic layer (see at least paragraph [0012], line 3; paragraph [0022] line 8; paragraphs [0026]-[0027]; and paragraph [0038]).

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang (US 5,937,272) in view of Wittman et al. (US 2004/0036856).

Referring to claims 2, 5 and 7, Tang discloses a method of making an OLED (see Figs. 2 and 4-6) comprising the step of using radiation 130 to transfer organic material 123 from a donor to an OLED substrate 20 to form an organic layer. Tang is silent regarding the steps of (a) measuring in-situ one or more parameters associated with the organic layer to produce a signal representative of a potential defect and (b) adjusting a subsequent processing in response to the signal to change the formation of a subsequent layer.

However, in the same field of endeavor, Wittman discloses a method of manufacturing an OLED comprising the step forming an organic layer, further comprising the steps of (a) measuring in-situ one or more parameters associated with the organic layer to produce a signal representative of a potential defect (see paragraph [0010], lines 4 to paragraph [0011], line 6) and (b) adjusting a subsequent processing in response to the signal to change the formation of a subsequent layer (see paragraphs [0023], [0024] and [0026]). Wittman teaches the desirability of

producing an organic layer whose thickness is as constant as possible over the entire surface of the OLED due to the strongly nonlinear relationship of the current density and layer thickness, in order to ensure uniform luminosity and color perception of the device. Wittman also teaches that the existence of substrate points not covered by the organic layer may even cause a short circuit between cathode and anode, causing the loss of functionality of the entire OLED (see paragraph [0005]). Accordingly, an in-situ measurement of possible defects allows for correction of such defects before completing the device, resulting in less manufacturing losses.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings of Wittman in the manufacture of the OLED of Tang, with the purpose of producing a device having uniform luminosity and color perception, avoiding short circuits which cause loss of functionality of the entire OLED, and minimizing manufacturing costs by reducing completion of defective devices.

Referring to claim 6, Tang-Wittman discloses reworking to correct identified defect(s) (see '856, paragraphs [0026]-[0027]).

Referring to claim 9, Tang-Wittman discloses reworking the device using radiation thermal transfer of an organic layer to the defective location on the device (see '856, paragraphs [0026]-[0027], in view of Tang, Figs. 2 and 4-6).

Referring to claim 10, Tang-Wittman discloses testing the substrate by spectroscopy ellipsometry (see '856, at least paragraphs [0012] and [0038]).

In regards to claims 8, 11 and 12, Tang-Wittman discloses the claimed invention except for the limitation of testing the donor to identify any defect(s). Wittman discloses in-situ testing

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of the alignment between the coating structure and substrate prior deposition of said organic layer, and in-situ testing of the formed organic layer.

However, one of ordinary skill in the art would reasonably contemplate testing the donor for potential defect(s) in order to avoid transferring said defect(s) into the OLED substrate. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to test the donor before forming the organic layer in the OLED substrate, with the purpose of detecting potential defect(s) in the donor which could be transferred to the device, thereby reducing the possibilities of defect(s), and decreasing manufacturing costs by avoiding completing defective devices.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 571-272-2451. The examiner can normally be reached on Monday thru Thursday, from 8:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
gc

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